INDEX TO VOLUME 92, 1985
THE AMERICAN MATHEMATICAL MONTHLY

Author Index	750	Photos	758
Subject Index	752	Miscellanea	758
Problems and Solutions	756	Index of	
Reviews	757	Special Recurring Topics	758
Letters to the Editor	758	Rebuses	758

AUTHOR INDEX

ABIAN ALEXANDER Solvability of infinite systems of polynomial equations over the field of complex numbers 94–98

AKIN ETHAN AND DAVIS MORTON Bulgarian solitaire 237–250

ALEXANDERSON GL See Klosinski LF

ALPERIN ROGER *P*-adic binomial coefficients mod *p* 576–578

ARNOLD LK, BENKOSKI SJ, AND MCCABE BJ The discriminator (a simple application of Bertrand's postulate) 275–277

ASSMUS JR EF Pi 213–214

BAKER IN AND RIPPON PJ A note on complex iteration 501–504

BANKSTON PAUL AND FOX RALPH Topological partitions of Euclidean space by spheres 423–424

BARDSLEY WG AND WOOD RMW Critical points and sigmoidicity of positive rational functions 37–48

BENKOSKI SJ See Arnold LK

BERNDT BC The gamma function and the Hurwitz zeta function 126–130

BILER PIOTR Dini type theorems on positive series 347–349

BLOM GUNNAR A simple property of exchangeable random variables 491–492

BLOORE FJ AND MORTON HR Advice on hanging pictures 309–321

BOAS ML AND BOAS RP A simplification of some contour integrations 212–213

BOAS RP See Boas ML

BOTSKO MW AND GOSSER RA On the differentiability of functions of several variables 663–665

BRASSETT SA (deceased) See Giblin PJ

BRESSOUD DM AND ZEILBERGER DORON Bijecting Euler's partitions-recurrence 54–55

BRITT JONATHAN The anatomy of low dimensional stable singularities 183–201

BURGESS CE Classifications of surfaces 349–354

BURK FRANK By all means 50

CHANN NN AND KWONG MK Hermitian matrix inequalities and a conjecture 533–541

CHANG G-Z Planar metric inequalities derived from the Vandermonde determinant 495–499

CHARNOW A AND CHARNOW E On transcendental linear operators 345–347

CHARNOW E See Charnow A

CHAVES MA Spaces where all continuity is uniform 487–489

CHICONE CARMEN, KALTON NJ, AND PAPICK IJ A converse for the Cayley-Hamilton theorem 134–136

CLARK DS A combinatorial theorem on circulant matrices 725–729

CONNOR JEFF A short proof of Steinhaus' theorem on summability 420–421

CULL PAUL AND ECKLUND JR EF Towers of Hanoi and analysis of algorithms 407–420

DAVIS MORTON See Akin Ethan

DAWSON RJ MACG Monostatic simplexes 541–546

DE CARVALHO FJC Characterizing maximally looped closed curves 202–207

DIAMOND HARVEY AND GELLES GREGORY Interlaced second category sets 138–140

DROBOT VLADIMIR AND MORAYNE MICHAL Continuous functions with a dense set of proper local maxima 209–211

DUEMMEL JAMES See Leonard IE

DWASS MEYER On the convolution of Cauchy distributions 55–57

ECKLUND JR EF See Cull Paul

EULER HOUSTON Lion-hunting with logic 140

FINBOW A The bisection method: a best case analysis 285–286

FISHER JC, RUOFF D, AND SHILLETO J Perpendicular polygons 23–37

FOX RALPH See Bankston Paul

FRAENKEL AS Systems of numeration 105–114

FRISKE MEL Teaching proofs: a lesson from software engineering 142–144

GALE DAVID AND SOTOMAYOR MARILDA Ms Machiavelli and the stable matching problem 261–268

GANDER WALTER On Halley's iteration method 131–134

GELLES GREGORY See Diamond Harvey

INDEX TO VOLUME 92, 1985
THE AMERICAN MATHEMATICAL MONTHLY

Author Index	750	Photos	758
Subject Index	752	Miscellanea	758
Problems and Solutions	756	Index of	
Reviews	757	Special Recurring Topics	758
Letters to the Editor	758	Rebuses	758

AUTHOR INDEX

ABIAN ALEXANDER Solvability of infinite systems of polynomial equations over the field of complex numbers 94–98

AKIN ETHAN AND DAVIS MORTON Bulgarian solitaire 237–250

ALEXANDERSON GL See Klosinski LF

ALPERIN ROGER *P*-adic binomial coefficients mod *p* 576–578

ARNOLD LK, BENKOSKI SJ, AND MCCABE BJ The discriminator (a simple application of Bertrand's postulate) 275–277

ASSMUS JR EF Pi 213–214

BAKER IN AND RIPPON PJ A note on complex iteration 501–504

BANKSTON PAUL AND FOX RALPH Topological partitions of Euclidean space by spheres 423–424

BARDSLEY WG AND WOOD RMW Critical points and sigmoidicity of positive rational functions 37–48

BENKOSKI SJ See Arnold LK

BERNDT BC The gamma function and the Hurwitz zeta function 126–130

BILER PIOTR Dini type theorems on positive series 347–349

BLOM GUNNAR A simple property of exchangeable random variables 491–492

BLOORE FJ AND MORTON HR Advice on hanging pictures 309–321

BOAS ML AND BOAS RP A simplification of some contour integrations 212–213

BOAS RP See Boas ML

BOTSKO MW AND GOSSER RA On the differentiability of functions of several variables 663–665

BRASSETT SA (deceased) See Giblin PJ

BRESSOUD DM AND ZEILBERGER DORON Bijecting Euler's partitions-recurrence 54–55

BRITT JONATHAN The anatomy of low dimensional stable singularities 183–201

BURGESS CE Classifications of surfaces 349–354

BURK FRANK By all means 50

CHANN NN AND KWONG MK Hermitian matrix inequalities and a conjecture 533–541

CHANG G-Z Planar metric inequalities derived from the Vandermonde determinant 495–499

CHARNOW A AND CHARNOW E On transcendental linear operators 345–347

CHARNOW E See Charnow A

CHAVES MA Spaces where all continuity is uniform 487–489

CHICONE CARMEN, KALTON NJ, AND PAPICK IJ A converse for the Cayley-Hamilton theorem 134–136

CLARK DS A combinatorial theorem on circulant matrices 725–729

CONNOR JEFF A short proof of Steinhaus' theorem on summability 420–421

CULL PAUL AND ECKLUND JR EF Towers of Hanoi and analysis of algorithms 407–420

DAVIS MORTON See Akin Ethan

DAWSON RJ MACG Monostatic simplexes 541–546

DE CARVALHO FJC Characterizing maximally looped closed curves 202–207

DIAMOND HARVEY AND GELLES GREGORY Interlaced second category sets 138–140

DROBOT VLADIMIR AND MORAYNE MICHAL Continuous functions with a dense set of proper local maxima 209–211

DUEMMEL JAMES See Leonard IE

DWASS MEYER On the convolution of Cauchy distributions 55–57

ECKLUND JR EF See Cull Paul

EULER HOUSTON Lion-hunting with logic 140

FINBOW A The bisection method: a best case analysis 285–286

FISHER JC, RUOFF D, AND SHILLETO J Perpendicular polygons 23–37

FOX RALPH See Bankston Paul

FRAENKEL AS Systems of numeration 105–114

FRISKE MEL Teaching proofs: a lesson from software engineering 142–144

GALE DAVID AND SOTOMAYOR MARILDA Ms Machiavelli and the stable matching problem 261–268

GANDER WALTER On Halley's iteration method 131–134

GELLES GREGORY See Diamond Harvey

GERLA G AND VOLPE R Geometry without points 707–711
GIBLIN PJ AND BRASSETT SA (deceased) Local symmetry of plane curves 689–707
GOLD KF See Turner EC
GOSSER RA See Botsko MW
GREENBERG MJ Correction to note on the Cayley-Hamilton theorem 583
GRINBERG EL On the smoothness hypothesis in Sard's theorem 733–734
GUPTA HN A theorem in combinatorics and Wilson's theorem 575–576
GUY RK Monthly unsolved problems 1969–1985 717–725
HALPERN FRED Using the multivariable chain rule 144–145
HARARY FRANK AND ROBINSON RW The diameter of a graph and its complement 211–212
HILTON PETER On all sorts of automorphisms 650–656
HIRSCHHORN MD A simple proof of Jacobi's two-square theorem 579–580
ISAACS IM Solution of polynomials by real radicals 571–575
JOHNSON JERRY An elementary characterization of weak convergence of measures 136–137
KALTON NJ See Chicone Carmen
KIMELFELD BORIS An inequality concerning minors of a semidefinite matrix 354–355
KLOSINSKI LF, ALEXANDERSON GL, AND LARSON LC The William Lowell Putnam mathematical competition 560–567
KNUTH DE Algorithmic thinking and mathematical thinking 170–181
KREITH KURT Wiener chains 281–284
KWONG MK See Chan NN
LAGARIAS JC The $3x + 1$ problem and its generalizations 3–23
LANGE RIDGLEY AND WALSH RA A heuristic for the Poisson integral for the half plane and some caveats 356–358
LARSEN ME Rubik's revenge: the group theoretical solution 381–390
LARSON LC See Klosinski LF
LEACH RJ On Gelbaum's algorithm for computing the minimal polynomial of a matrix 208–209
LEADER SOLOMON The inclusion-exclusion probability formulas by Taylor's theorem 343–345
LEHMER DH Interesting series involving the central binomial coefficient 449–457
LEONARD IE AND DUEMMEL JAMES More—and Moore—power series without Taylor's theorem 588–589
LIPSCHUTZ SEYMOUR Note on graphs and matrix inequalities 277–280
LORD NJ Simultaneous complements in finite-dimensional vector spaces 492–493
MACGREGOR TH Linear methods in geometric function theory 392–406
MARDEN MORRIS The search for a Rolle's theorem in the complex domain 643–650
MCCABE BJ See Arnold LK
MCKEE TA The logic of graph-theoretic duality 457–464
MINASSIAN DP A simple structure theorem for two-generator, one-relation groups 580–583
MORAYNE MICHAL See Drobot Vladimir
MORDUCHOW MORRIS Discrete and continuous compounding 734–735
MORTON HR See Bloore FJ
O'BRIEN THOMAS Fixed points and exam taking strategy 659–661
OLKIN INGRAM A probabilistic proof of a theorem of Schur 50–51
OSSERMAN ROBERT The four-or-more vertex theorem 332–337
OWINGS JR JC A combinatorial proof of a criterion for normality 662–663
PAGE WARREN Compactness and closedness in locally compact Hausdorff spaces 504–506
PAPICK IJ See Chicone Carmen
PAPP FJ The d'Alembert functional equation 273–275
PAUL JL Combinatorial proofs of Pascal's formula for sums of powers of the integers 499–501
PENNEY DE AND POMERANCE CARL Multiplicative relations for sums of initial kth powers 729–731
PEREIRA NC A short proof of Chebyshev's theorem 494–495
PITTENGER AO The logarithmic mean in n variables 99–104
POMERANCE CARL See Penney DE
RAYMOND JS See Rogalski Marc
REINER DL Enumeration in music theory 51–54
RICHERT ARTHUR A non-Simpsonian use of parabolas in numerical integration 425–426
RICHMOND DE An elementary proof of a theorem in calculus 589–590
RIPPON PJ See Baker IN
ROBINSON RW See Harary Frank
ROGALSKI MARC AND RAYMOND JS Inequalities about symmetric compact convex sets in the plane 466–480
ROSE NJ On regular Markov chains 146
RUDIN WALTER Unique right inverses are two-sided 489–490
RUOFF D See Fisher JC
SCOTT DAVID When is an ordinary differential equation separable 422–423
SHILLETO J See Fisher JC
SHUCHAT ALAN Generalized least squares and eigenvalues 656–659
SNAPPER ERNST An ingrained error concerning resultants 141
SOTOMAYOR MARILDA See Gale David
SPRING D On the second derivative test for constrained local extrema 631–643
STONE AH Trees and power-sums 328–331

SZYMANSKI JE The resultant of several vectors: an unusual insight 338–343
THOMAS ROBIN A combinatorial construction of a nonmeasurable set 421–422
TURNER EC AND GOLD KF Rubik's groups 617–629
VAN ROOTSELAAR B How to solve the system $x' = Ax$ 321–326
VARBERG DALE Pick's theorem revisited 584–587
VELDKAMP GR The isoperimetric point and the point(s) of equal detour in a triangle 546–558
VILLANI ALFONSO Another note on the inclusion $L^p(\mu) \subset L^q(\mu)$ 485–487
VOLPE R See Gerla G
WALL CR Unbounded sequences of Euler-Dedekind means 587
WALLEN LJ Modified iteration and probability 481–485
WALSH RA See Lange Ridgley
WALTER WOLFGANG An elementary proof of the Cauchy-Kowalevsky theorem 115–126
WATERHOUSE WC When one equation solves them all 270–273
WEAVER JR Centrosymmetric (cross-symmetric) matrices, their basic properties, eigenvalues, and eigenvectors 711–717
WILF HS Some examples of combinatorial averaging 250–261
WOOD RMW See Bardsley WG
WOS L Automated reasoning 85–92
ZAKS JOSEPH How does a complete graph split into bipartite graphs and how are neighborly cubes arranged 568–570
ZEILBERGER DORON See Bressoud DM

SUBJECT INDEX

This index uses the current version of AMS 1980 Mathematics Subject Classification.

00-XX GENERAL

–01 Elementary exposition, textbooks EF ASSMUS JR 213
A05 General mathematics MEL FRISKE 142 DE KNUTH 170
A07 Problem books RK GUY 717
A25 Methodology and philosophy of mathematics DE KNUTH 170
A40 Humor HOUSTON EULER 140

03-XX MATHEMATICAL LOGIC AND FOUNDATIONS

B30 General logic: Foundations of classical theories TA MCKEE 457
F65 Proof theory and constructive mathematics: Other constructive mathematics DE KNUTH 170

05-XX COMBINATORICS

–02 Advanced exposition (research surveys, monographs, etc.) HS WILF 250
–04 Explicit machine computation and programs (not the theory of computation or programming) PAUL CULL AND EF ECKLUND JR 407
A10 Classical combinatorial problems: Factorials, binomial coefficients, combinatorial functions SOLOMON LEADER 343
A15 Classical combinatorial problems: Combinatorial enumeration problems, generating functions SOLOMON LEADER 343 DL REINER 51
A17 Classical combinatorial problems: Partitions ETHAN AKIN AND MORTON DAVIS 237
A19 Classical combinatorial problems: Combinatorial identities JL PAUL 499
A99 Classical combinatorial problems: HN GUPTA 575
B30 Designs and configurations: Other designs, configurations DS CLARK 725
C05 Graph theory: Trees TA MCKEE 457 AH STONE 328
C50 Graph theory: Graphs and matrices SEYMOUR LIPSCHUTZ 277
C70 Graph theory JOSEPH ZAKS 568
C99 Graph theory RK GUY 717 TA MCKEE 457 FRANK HARARY AND RW ROBINSON 211 ROBIN THOMAS 421

08-XX GENERAL MATHEMATICAL SYSTEMS

A45 Universal algebra: Equational compactness ALEXANDER ABIAN 94

10-XX NUMBER THEORY

A10 Elementary number theory: Congruences, primitive roots LK ARNOLD, SJ BENKOSKI, AND BJ MCCABE 275
A20 Elementary number theory: Number-theoretic

functions, related numbers; inversion formulas LK Arnold, SJ Benkoski, and BJ McCabe 275 CR Wall 587
A25 Elementary number theory: Elementary prime number theory, factorization NC Pereira 494
A30 Elementary number theory: Algorithms and expansions; digital properties JC Lagarias 3
A35 Elementary number theory: Recurrence sequences AS Fraenkel 105
A45 Elementary number theory: Partitions Doron Zeilberger 54
A50 Elementary number theory AH Stone 328
A99 Elementary number theory Roger Alperin 576
B15 Diophantine equations: Higher degree equations DE Penney and Carl Pomerance 729
J05 Additive theory: Sums of squares MD Hirschhorn 579
L15 Sequences of integers: Representation functions AS Fraenkel 105

12-XX ALGEBRAIC NUMBER THEORY, FIELD THEORY AND POLYNOMIALS

D15 Real and complex fields: Formally real fields WC Waterhouse 270
E05 General field theory: Polynomials (irreducibility, etc.) Ernst Snapper 141
F10 Field extensions: Separable extensions, Galois theory IM Isaacs 571

13-XX COMMUTATIVE RINGS AND ALGEBRAS

C99 Theory of modules and ideals Peter Hilton 656

15-XX LINEAR AND MULTILINEAR ALGEBRA; MATRIX THEORY (FINITE AND INFINITE)

-01 Elementary exposition, textbooks NJ Rose 146
A03 Vector spaces, linear dependence, rank NJ Lord 492
A04 Linear transformations, semilinear transformations A Charnow and E Charnow 345
A09 Matrix inversion, generalized inverses JR Weaver 711
A15 Determinants, permanents, other special matrix functions Carmen Chicone, NJ Kalton, and IJ Papick 134 Boris Kimelfeld 354 JR Weaver 711
A18 Eigenvalues, singular values, and eigenvectors Alan Schuchat 656 JR Weaver 711
A21 Canonical forms, reductions, classification Ingram Olkin 50
A24 Matrix equations and identities MJ Greenberg 583 Peter Hilton 656
A36 Matrices of integers Peter Hilton 656
A45 Miscellaneous inequalities involving matrices NN Chan and MK Kwong 533 Seymour Lipschutz 277
A51 Stochastic matrices NJ Rose 146 JR Weaver 711
A63 Quadratic and bilinear forms, inner products JC Fisher, D Ruoff, and J. Shilleto 23 D Spring 631

16-XX ASSOCIATIVE RINGS AND ALGEBRAS

A99 Miscellaneous topics Walter Rudin 489

20-XX GROUP THEORY AND GENERALIZATIONS

D60 Abstract finite groups: Arithmetic and combinatorial problems JC Owings Jr 662
D99 Abstract finite groups EC Turner and KF Gold 617
E34 Structure and classification of infinite or finite groups: General structure theorems DP Minassian 580
F05 Special aspects of infinite or finite groups: Generators, relations, and presentations ME Larsen 381
F55 Special aspects of infinite or finite groups Peter Hilton 656

22-XX TOPOLOGICAL GROUPS, LIE GROUPS

D05 Locally compact groups and their algebras: General properties and structure of locally compact groups Warren Page 504

26-XX REAL FUNCTIONS

-01 Elementary exposition, textbooks MW Botsko and RA Gosser 663 DE Richmond 589
A06 Functions of one variable: One-variable calculus Fred Halpern 144 IE Leonard and James Duemmel 588 DE Richmond 589
A24 Functions of one variable: Differentiation, general theory, generalized derivatives, mean-value theorems Fred Halpern 144
A30 Functions of one variable: Singular functions, Cantor functions, functions with other special properties Vladimir Drobot and Michal Morayne 209
B05 Functions of several variables: Continuity and differentiation questions MW Botsko and RA Gosser 663 EL Grinberg 733
B12 Functions of several variables: Calculus of vector functions D Spring 631
C15 Polynomials, rational functions: Polynomials,

location of zeros WG BARDSLEY AND RMW WOOD 37
D15 Inequalities: Inequalities for sums, series and integrals AO PITTENGER 99
D99 Inequalities FRANK BURK 50

28-XX MEASURE AND INTEGRATION

A05 Classical measure theory: Classes of sets (Borel fields, σ-rings, etc.), measurable sets, Suslin sets, analytic sets DIAMOND HARVEY AND GREGORY GELLES 138
A33 Classical measure theory: Spaces of measures, convergence of measures JERRY JOHNSON 136
A99 Classical measure theory ROBIN THOMAS 421 ALFONSO VILLANI 485

30-XX FUNCTIONS OF A COMPLEX VARIABLE

–01 Elementary exposition, textbooks ML BOAS AND RP BOAS 212
–02 Advanced exposition (research surveys, monographs, etc.) TH MACGREGOR 392
A99 General properties MORRIS MARDEN 643
D05 Entire and meromorphic functions, and related topics: Functional equations in the complex domain, iteration and composition of analytic functions IN BAKER AND PJ RIPPON 501

31-XX POTENTIAL THEORY

A05 Two-dimensional theory: Harmonic, subharmonic, superharmonic functions RIDGLEY LANGE AND RA WALSH 356

33-XX SPECIAL FUNCTIONS

A15 Gamma and beta functions BC BERNDT 126

34-XX ORDINARY DIFFERENTIAL EQUATIONS

A05 General theory: Solutions in closed form, integration by quadratures, reduction of differential equations DAVID SCOTT 422
A30 General theory: Linear equations and systems B VAN ROOTSELAAR 321

35-XX PARTIAL DIFFERENTIAL EQUATIONS

A10 General theory: Cauchy-Kowalewski theorems WOLFGANG WALTER 115

39-XX FINITE DIFFERENCES AND FUNCTIONAL EQUATIONS

B20 Functional equations: Equations for one unknown function of one variable, rank greater than one FJ PAPP 273

40-XX SEQUENCES, SERIES, SUMMABILITY

A05 Convergence and divergence of infinite limiting processes: Convergence and divergence of series and sequences PIOTR BILER 347 LJ WALLEN 481
D09 Direct theorems on summability: Structure of summability fields JEFF CONNOR 420
H05 Functional analytic methods in summability JEFF CONNOR 420

41-XX APPROXIMATIONS AND EXPANSIONS

A45 Approximation by arbitrary linear expressions JE SZYMANSKI 338
A58 Series expansions (e.g. Taylor, Lidstone series, but not Fourier series) IE LEONARD AND JAMES DUEMMEL 588

42-XX FOURIER ANALYSIS

A99 Fourier analysis in one variable JC FISHER, D RUOFF, AND J SHILLETO 23

46-XX FUNCTIONAL ANALYSIS

A55 Topological linear spaces: Convexity, Choquet theory MARC ROGALSKI AND JS RAYMOND 466

49-XX CALCULUS OF VARIATIONS AND OPTIMAL CONTROL: OPTIMIZATION

B99 Necessary conditions and sufficient conditions for optimality D SPRING 631

51-XX GEOMETRY

K05 Distance geometry: General theory G GERLA AND R VOLPE 707
M05 Real and complex geometry: Euclidean geometries JC FISHER, D RUOFF, AND J SHILLETO 23
M25 Real and complex geometry: Length, area, and volume G-Z CHANG 495 JC FISHER, D RUOFF, AND J SHILLETO 23
N99 Analytic and descriptive geometry GR VELDKAMP 546

52-XX CONVEX SETS AND RELATED GEOMETRIC TOPICS

A10 Convex sets in 2 dimensions MARC ROGALSKI AND JS RAYMOND 466
A25 Polyhedra and polytopes RJ MACG DAWSON 541

A37 Other problems of combinatorial geometry JOSEPH ZAKS 568
A43 Lattices and convex bodies DALE VARBERG 584
A45 Packing, covering, tiling JOSEPH ZAKS 568
A99 Convex sets and related geometric topics: Miscellaneous topics RK GUY 717

53-XX DIFFERENTIAL GEOMETRY

A04 Classical differential geometry: Curves in Euclidean space FJC DE CARVALHO 202 PJ GIBLIN AND SA BRASSETT (deceased) 689 ROBERT OSSERMAN 332

54-XX GENERAL TOPOLOGY

A10 Generalities: Change of topology, comparison of topologies WARREN PAGE 504
B05 Basic constructions: Subspaces WARREN PAGE 504
B15 Basic constructions: Quotient spaces, decompositions PAUL BANKSTON AND RALPH FOX 423
D30 Fairly general properties: Compact spaces and generalizations MA CHAVES 487
D45 Fairly general properties: Local compactness, σ-compactness WARREN PAGE 504

57-XX MANIFOLDS AND CELL COMPLEXES

N05 Topological manifolds: Topology of E^2, 2-manifolds CE BURGESS 349
N15 Topological manifolds: Topology of E^n, n-manifolds ($3 < n < \infty$) PAUL BANKSTON AND RALPH FOX 423
R42 Differential topology: Immersions FJC DE CARVALHO 202

58-XX GLOBAL ANALYSIS, ANALYSIS ON MANIFOLDS

C27 Calculus on manifolds; nonlinear operators: Singularities of differentiable maps JONATHAN BRITT 183 PJ GIBLIN AND SA BRASSETT (deceased) 689

60-XX PROBABILITY THEORY AND STOCHASTIC PROCESSES

C05 Combinatorial probability SOLOMON LEADER 343
E05 Distribution theory: Distributions (general theory) MEYER DWASS 55
F15 Limit theorems: Strong theorems LJ WALLEN 481
G40 Stochastic processes: Stopping times; optimal stopping problems; gambling theory GUNNAR BLOM 491
J05 Markov processes: Markov processes with discrete parameter KURT KREITH 281

62-XX STATISTICS

C99 Decision theory THOMAS O'BRIEN 659
G30 Nonparametric inference: Order statistics LJ WALLEN 481
J05 Regression and correlation: Linear regression ALAN SHUCHAT 656
P05 Applications: Actuarial mathematics THOMAS O'BRIEN 659

65-XX NUMERICAL ANALYSIS

B10 Acceleration of convergence: Summation of series DH LEHMER 449
D30 Numerical approximation: Numerical integration ARTHUR RICHERT 425
H05 Nonlinear algebraic or transcendental equations: Single equations A FINBOW 285 WALTER GANDER 131

68-XX COMPUTER SCIENCE (INCLUDING AUTOMATA)

B99 Software MEL FRISKE 142
C05 Metatheory (excluding automata): Algorithms DE KNUTH 170
C25 Metatheory (excluding automata): Computational complexity and efficiency of algorithms PAUL CULL AND EF ECKLUND JR 407 RJ LEACH 208
E99 Discrete mathematics PAUL CULL AND EF ECKLUND JR 407
G10 Artificial intelligence: Pattern recognition, speech recognition PJ GIBLIN AND SA BRASSETT (deceased) 689
G15 Artificial intelligence: Theorem proving L WOS 85

70-XX MECHANICS OF PARTICLES AND SYSTEMS

C10 Statics: Potential energy FJ BLOORE AND HR MORTON 309

90-XX ECONOMICS, OPERATIONS RESEARCH, PROGRAMMING, GAMES

-01 Elementary exposition, textbooks MORRIS MORDUCHOW 734
D10 Game theory: n-person games, noncooperative DAVID GALE AND MARILDA SOTOMAYOR 261

PROBLEMS AND SOLUTIONS

PROBLEMS PROPOSED

Askey Richard 362
Beck Anatole 217
Bencze M 736
Blom Gunnar 286
Borwein Jon 217
Broline DM 147
Cater FS 147
Chew James 215
Cseh L 591
Cuculière Roger 428
Dodd FW and Mattics LE 215
Ehrhart E 215
Evans Ronald 740
Eynden CV 507
Foster KC 736
Frame JS 148
Funar Louis 58 427
Gessel Ira 591
Glasser ML 290
Golomb SW 359
Gonshor Harry 740
Hensley Doug 511
Hook Jay 507
Jacobson ET 148 359
Knuth DE 590
Lambert JP 507
Larson LC 215
Laub M 666
Letac Gérard 57 670 736
Li Weixuan 287 507
Lim TC 287
Long CT 736
Luks EM 512
Lupaş Alexandru 62 428
Luttmann Rick 360
Mac Hale Desmond 591
Merényi I 591
Nabutovskii AV 62
Nicolaescu LI 62
Pamfilos Paris 287
Passell Nicholas 148
Pelling, MJ 147 665 666
Perkins MS 670
Popescu CP 147 360 590
Rassias TM 665
Rubel LA 736
Rubinstein Zalman 215
Satyanarayana K 58
Schoenberg IJ 433 595 666
Schürger Klaus 595
Schwellinger Frank 666
Searcóid MO 591
Shafer RE 290
Smarandache Florentin 428
Smith CJ 507
Spellman Dennis 287 591
Stockmeyer PK 736
Szwarc Ryszard 362
Tyler DB 507
Villani Alfonso 359 507
Wang ETH 287 507
Ward MB 512
Waterhouse WC 427 735
Wilansky A 290
Wu PY 63
Young RM 148
Zaiming Zhang 57

PROBLEMS SOLVED

Abel U 666 737
Alex LJ 63
Andersen KF 668
Ašić MD 437
Bagchi Bhaskar 365
Bang Thøger 514
Barr Michael 364
Bernstein KL 593
Biler Piotr 292
Bloom DM 430
Boente P 360
Borwein J 148
Cater FS 671
Chernoff PR 364
Chetty CSK 216 289
Chico Problem Group 287
Davies RO 64
Dodge CW 360
Dou Jordi 431 592
Dougherty Randall 512
Edgar GA 433
Eves Howard 431
Gentile ER 668
Gerber Leon 669
Hernández Salvador 434
Ismail MEH 294
Jeurissen RH 219
Josephy Michael 739
Klamkin MS 433 511
Kuipers L 62
Laugwitz Detlef 671
Lih K-W 594
Lossers OP 60 216 290
361 434 508 511 516 594
Mascioni VD 737
Mattics LE 149 217
McGregor J 433
Meir A 433
Miku N 432
Monier J-M 435
Netuka Ivan 150
Newcomb WA 58 436
Niederreiter Harald 672
Niven Ivan 739
Oman John 431
Pambuccian Victor 591
Pelling MJ 363 596
Propp James 599
Richter B 509
Rubel LA 366
Ruehr OG 508
Schoenberg IJ 59
Schwenk AJ 670
Shafer RE 597
Shank H 509
Shapiro LW 430
Slifker JF 218
Smith JC 740
Smith Paul 738
Steele JM 63
Takács Lajos 293 515
Tissier Alain 217 291
University of South
Alabama Problem Group 741
Vesely Jiri 150
Woltermann Michael 216
Zelinsky Daniel 365

SOLUTIONS

Numbers in boldface refer to problems; those in lightface to pages.

E 2462	360	**E 2961**	739	**6428**	63	**6448**	436
E 2740	591	**E 2962**	289	**6429**	64	**6449**	437
E 2898	666	**E 2963**	62	**6430**	148	**6450**	513
E 2903	430	**E 2965**	668	**6431**	149	**6451**	514
E 2911	58	**E 2968**	361	**6432**	364	**6452**	515
E 2914	508	**E 2969**	668	**6433**	217	**6453**	516
E 2918	592	**E 2970**	509	**6436**	291	**6454**	516
E 2923	736	**E 2971**	511	**6437**	365	**6455**	596
E 2924	508	**E 2974**	430	**6438**	150	**6456**	597
E 2932	593	**E 2978**	432	**6439**	218	**6457**	599
E 2933	737	**E 2987**	669	**6440**	433	**6458**	670
E 2941	287	**E 2992**	511	**6441**	219	**6459**	671
E 2947	216	**E 2994**	739	**6442**	292	**6460**	671
E 2950	594	**6043**	363	**6443**	293	**6461**	672
E 2955	60	**6392**	364	**6444**	434	**6462**	740
E 2958	289	**6398**	512	**6445**	294	**6464**	741
E 2959	360	**6411**	63	**6446**	434	**6466**	742
E 2960	738	**6421**	596	**6447**	435	**6468**	742

REVIEWS

Names of authors are in ordinary type; those of reviewers in capitals.

Balinski ML and Young HP *Meeting the Ideal of One Man One Vote* WF LUCAS 302–303

Banchoff Thomas and Wermer John *Linear Algebra through Geometry* MW HIRSCH 603–605

Brams SJ, Lucas WF and Straffin PD (eds.) *Political and Related Models* JOSEPH MALKEVITCH 368–369

Bucciarelli LL and Dworsky Nancy *Sophie Germain: An Essay in the History of the Theory of Elasticity* JW DAUBEN 64–70

Calinger Ronald (ed.) *Classics of Mathematics* HM EDWARDS 601–603

Fisher Alec *Formal Number Theory and Computability: A Workbook* MD DAVIS 439–440

Frey PW (ed.) *Chess Skill in Man and Machines* HANS BERLINER 369–371

Gauld DB *Differential Topology: An Introduction* THEODORE SHIFRIN 294–299

Gelbaum Bernard *Problems in Analysis* HENRY HELSON 372–373

Godbillon C *Dynamical Systems on Surfaces* RF WILLIAMS 70–72

Grattan-Guinness I (ed.) *From the Calculus to Set Theory, 1630–1910: An Introductory History* RE RIDER 225–227

Haberman Richard *Elementary Applied Partial Differential Equations with Fourier Series and Boundary Value Problems* GB PASSTY 441–443

Halmos PR *Selecta: Expository Writing* RP BOAS 154–155

Hörmander Lars *The Analysis of Linear Partial Differential Operators, Vols. I & II* ME TAYLOR 745–749

Hutchins HC *Examples of Commutative Rings* CRAIG HUNEKE 300–301

Hyman Anthony *Charles Babbage: Pioneer of the Computer* JT O'DONNELL 522–525

Jacobson Nathan *Basic Algebra* KENNETH BOGART 743–745

Klingenberg Wilhelm *Riemannian Geometry* H WU 519–522

Larson LC *Problem-Solving through Problems* HARLEY FLANDERS 676–678

Loweke GP *The Lore of Prime Numbers* CLAUDIA SPIRO 672–675

Lukes DL *Differential Equations: Classical to Controlled* EMILIO ROXIN 223–225

Mac Lane Saunders and Birkhoff Garrett *Algebra* KENNETH BOGART 743–745

Newman DJ *A Problem Seminar* IVAN NIVEN 437–439

Ovsiannikov LV *Group Analysis of Differential Equations* WILLARD MILLER JR 155–156

Reid Constance *Neyman: From Life* SAMUEL KOTZ 219–223

Rota G-C (ed.) *Lars Valerian Ahlfors: Collected Papers Volume I 1929–1955, Volume II 1954–1979* CJ EARLE 366–368.

Sachs Lothar *Applied Statistics: A Handbook of Techniques* GREG CONSTANTINE 371–372

Sesiano Jacques *Books IV to VII of Diophantus' Arithmetica: In the Arabic Translation Attributed to Qusṭā Ibn Lūqā* WILBUR KNORR 150–154

Shaw Ronald *Linear Algebra and Group of Representations* GJ JANUSZ 517–519

Smullyan Raymond *The Lady or the Tiger and Other Logic Puzzle.* STEWART SHAPIRO 156–157

Wunsch AD *Complex Variables with Applications* GEORGE PIRANIAN 600–601